



Luxul Configuration

Single and Multiple Switches

The EVO-IP HDMI over IP System has been tested and confirmed to work with Luxul AMS and XMS Switches. Below are screenshots showing the configuration needed to get the system up and running. These have been tested on Luxul switches with FW 4.0.8 and 4.1.1 installed.

Single Switch Configuration:

1. Enable IGMP Snooping by going to: Configuration->IPMC->IGMP Snooping->Basic Configuration. Save the setting once finished.
2. Disable Unregistered IPMCv4 Flooding
3. Enable Fast Leave on all ports

NOTE: When using a control system, for best results ensure the port that is connected to an external (outside of EVO-IP) network is selected as the Router Port.



Model: XMS-2624P
 Firmware Version: v4.0.8

- Configuration
- Quick Setup
- Green Ethernet
- Thermal Protection
- Ports
- DHCP
- Security
- Aggregation
- Loop Protection
- IPMC Profile
- MVR
- IPMC
- IGMP Snooping
- Basic Configuration**
- VLAN Configuration
- Port Filtering Profile
- MLD Snooping
- LLDP
- MAC Table
- Voice VLAN
- QoS
- Mirroring
- UPnP
- GVRP
- sFlow
- UDLD
- Monitor
- Quick Setup
- Green Ethernet

IGMP Snooping Configuration

Global Configuration	
Snooping Enabled	☒ ¹
Unregistered IPMCv4 Flooding Enabled	☐ ²
IGMP SSM Range	232.0.0.0 / 8
Leave Proxy Enabled	☐
Proxy Enabled	☐

Port Related Configuration

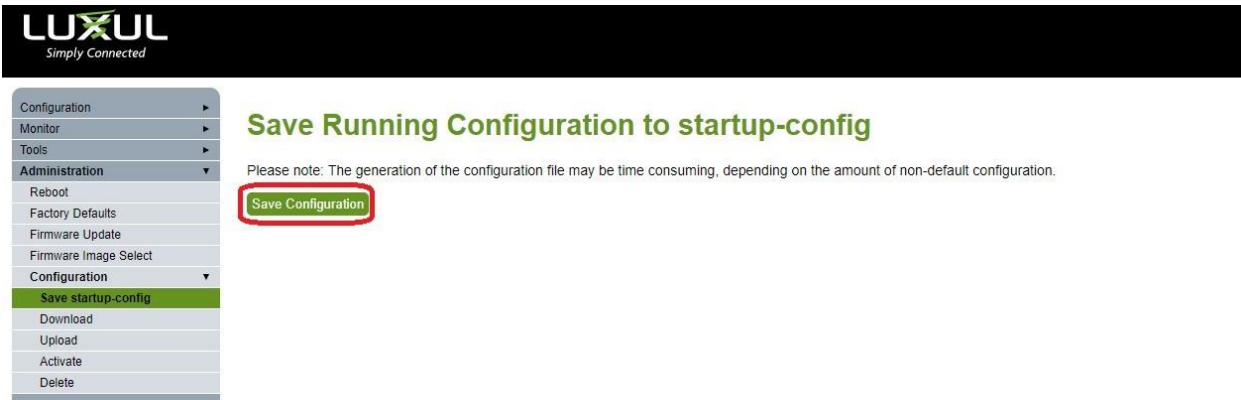
Port	Router Port	Fast Leave	Throttling
*	☐	☒	<>
1	☐	☒	unlimited
2	☐	☒	unlimited
3	☐	☒	unlimited
4	☐	☒	unlimited
5	☐	☒	unlimited
6	☐	☒	unlimited
7	☐	☒	unlimited

1. Next Add and enable an IGMP Snooping VLAN Configuration by going to Configuration->IPMC->IGMP Snooping->VLAN Configuration.

- Click on **Add New IGMP VLAN**
- Provide **VLAN ID** (Shown below as 1)
- Check **Snooping Enabled**
- Save the setting once finished.

* for best results and to prevent you network from being flooded, enter the IP address of the EVOIPCTL1 control box in the Querier Address field and click save.

3. To make sure you switch settings are saved and come up after power is cycles, go to **Administration->Configuration-> Save Startup Config**, then click on **Save Configuration**.



Multi-Switch Configuration

The EVO-IP HDMI over IP System has been tested and confirmed to work with Luxul AMS and XMS Switches. Below are two methods and screenshots showing the configuration needed to get the system up and running with multiple switches.

Setting Up Core/Extended Switches

For static setups that do not require switching of inputs (transmitters) and outputs (receivers) across different switches but still would like to maintain the control and remote monitoring capabilities of the system. Depending on the resolution and settings of the source on the transmitter, bitrate can vary between 250Mbps to 850Mbps (4K and HDR applications) when set to **AUTO** on the **TX Speed** setting in **Setup**. If additional bandwidth is needed based on your installation or you have experiencing issues, see the **Create an Aggregate Link** section below.

NOTE: The **TX SPEED** setting can also be adjusted and fixed from 10Mbps to 200Mbps

Core Switch

1. Enable IGMP Snooping and disable IPMCv4 Flooding by going to: Configuration->IPMC->IGMP Snooping->Basic Configuration. Save the setting once finished.



Model: XMS-2624P
 Firmware Version: v4.0.8

- Configuration
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- Green Ethernet
- Thermal Protection
- Ports
- DHCP
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- IPMC Profile
- MVR
- IPMC
- IGMP Snooping
- Basic Configuration**
- VLAN Configuration
- Port Filtering Profile
- MLD Snooping
- LLDP
- MAC Table
- Voice VLAN
- QoS
- Mirroring
- UPnP
- GVRP
- sFlow
- UDLD
- Monitor
- Quick Setup
- Green Ethernet

IGMP Snooping Configuration

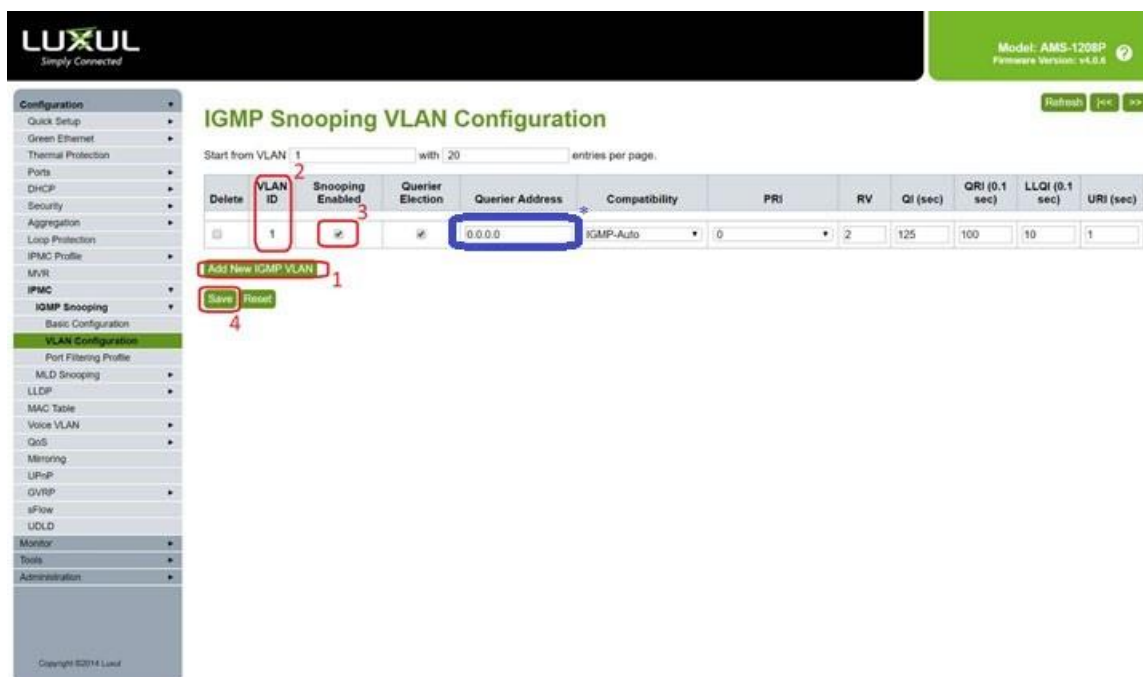
Global Configuration	
Snooping Enabled	☒ ¹
Unregistered IPMCv4 Flooding Enabled	☐ ²
IGMP SSM Range	232.0.0.0 / 8
Leave Proxy Enabled	☐
Proxy Enabled	☐

Port Related Configuration

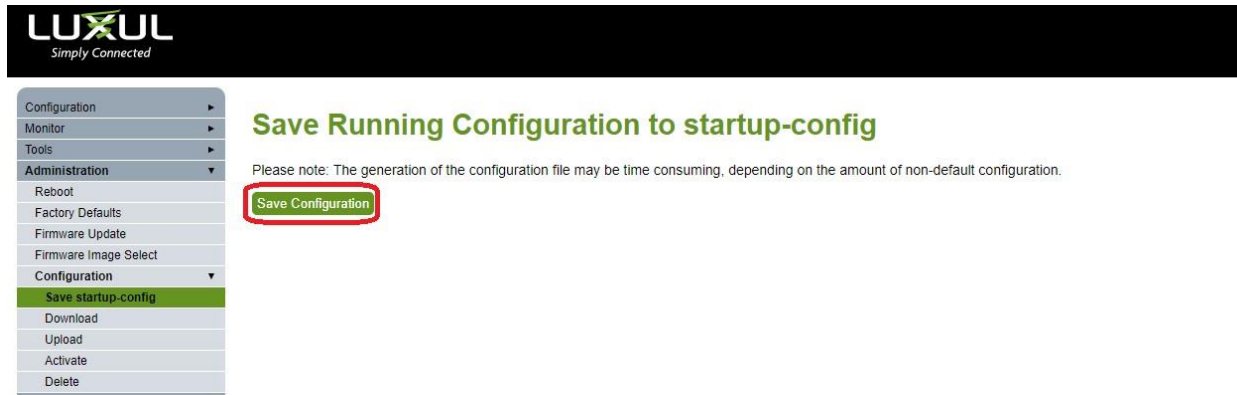
Port	Router Port	Fast Leave	Throttling
*	☐	☒	<>
1	☐	☒	unlimited
2	☐	☒	unlimited
3	☐	☒	unlimited
4	☐	☒	unlimited
5	☐	☒	unlimited
6	☐	☒	unlimited
7	☐	☒	unlimited

2. Next Add and enable an IGMP Snooping VLAN Configuration by going to Configuration->IPMC->IGMP Snooping->VLAN Configuration.

- Click on **Add New IGMP VLAN**
- Provide **VLAN ID** (Shown below as **1**)
- Check **Snooping Enabled**
- Under **Querier Address**, enter the IP address of the Control Box
- For **Compatibility**, select **IGMPv2** from the dropdown menu
- Save the setting once finished



3. To make sure you switch settings are saved and come up after power is cycles, go to **Administration->Configuration->Save Startup Config**, then click on **Save Configuration**.



Extended Switch(es)

When setting up an additional switch, it is important to change the default IP address of the switches that come AFTER the Core Switch so that there is not an IP conflict.

Change Switch IP Address

1. Go to Configuration
2. Quick Setup
3. IP->IP Interfaces
4. Change the IP address provided in the IPv4 field
5. Click Save
6. To make sure you switch settings are saved and come up after power is cycles, go to **Administration>Configuration-> Save Startup Config**, then click on **Save Configuration**.

Enable IGMP Snooping

1. Enable IGMP Snooping by going to: Configuration->IPMC->IGMP Snooping->Basic Configuration. Save the setting once finished.

LUXUL
Simply Connected

Model: AMS-1208P
Firmware Version: v4.0.5

Configuration

- Quick Setup
- Switch Ethernet
- Threat Protection
- Ports
- DHCP
- Security
- Aggregation
- Loop Protection
- IPMC Profile
- MVR
- IPMC
- IGMP Snooping**
- VLAN Configuration
- Port Filtering Profile
- VLD Snooping
- LLDP
- MAC Table
- Voice VLAN
- QoS
- Mirroring
- UPnP
- QoS
- Flow
- UDLD
- Monitor
- Tools
- Administration

IGMP Snooping Configuration

Global Configuration

Snooping Enabled	☒
Unregistered IPMCv4 Flooding Enabled	☒
IGMP SSM Range	232.0.0.0 / 8
Leave Proxy Enabled	☐
Proxy Enabled	☐

Port Related Configuration

Port	Router Port	Fast Leave	Throttling
1	☐	☐	unlimited
2	☐	☐	unlimited
3	☐	☐	unlimited
4	☐	☐	unlimited
5	☐	☐	unlimited
6	☐	☐	unlimited
7	☐	☐	unlimited
8	☐	☐	unlimited
9	☐	☐	unlimited
10	☐	☐	unlimited
11	☐	☐	unlimited

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2. Next Add and enable an IGMP Snooping VLAN Configuration by going to Configuration->IPMC->IGMP Snooping->VLAN Configuration.
 - Click on **Add New IGMP VLAN**
 - Provide **VLAN ID** (Shown below as 1)
 - Check **Snooping Enabled**

- Under **Querier Address**, enter the IP address of the **CORE SWITCH** - For **Compatibility**, select **IGMPv2** from the dropdown menu
- Save the setting once finished.

LUXUL
Simply Connected

Model: AMS-1208P
Firmware Version: v4.0.8

Refresh << >>

IGMP Snooping VLAN Configuration

Start from VLAN 1 with 20 entries per page.

Delete	VLAN ID	Snooping Enabled	Querier Election	Querier Address	Compatibility	PRI	RV	QI (sec)	QRI (0.1 sec)	LLQI (0.1 sec)	URI (sec)
☐	1	☒	☒	0.0.0.0	IGMPv2	0	2	125	100	10	1

Add New IGMP VLAN **Save** **Reset**

3. To make sure you switch settings are saved and come up after power is cycles, go to **Administration->Configuration->Save Startup Config**, then click on **Save Configuration**.

Configuration	▶
Monitor	▶
Tools	▶
Administration	▼
Reboot	
Factory Defaults	
Firmware Update	
Firmware Image Select	
Configuration	▼
Save startup-config	
Download	
Upload	
Activate	
Delete	

Save Running Configuration to startup-config

Please note: The generation of the configuration file may be time consuming, depending on the amount of non-default configuration.

Save Configuration

Creating an Aggregated Link

If you find you are having issues with higher resolution sources in systems that rely on switching sources, creating an aggregated link will help achieve higher bandwidth capacity when going between switches. This is only dependent on the model of switch you are using. Check the manufacturers features and specifications to ensure this is possible.

1. Within the Luxul GUI of the first switch, go to **Configuration->Aggregation->Static**
2. Select which ports you wish to aggregate to a **Group ID**.
3. Click **Save** button once finished.
4. Repeat for additional switches within the system.

Locality	Group ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Normal	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Global	1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Global	2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Adding VLANs

If your finding the EVO-IP system not working reliably. Having the system on its own VLAN might help. Doing this separates the EVO-IP system from anything else on your network that could be causing issues with the EVO-IP. For this, you will need access to the main router or request to put in a static route in.

1. Create and assign a new VLAN by going to **Configuration->Quick Setup->VLANs**. In **Allowed Access VLANs** box, you want to put “,2” in the box so its “1,2”.



Model: AMS-4424P
Firmware Version: v4.1.3

- Configuration
- Quick Setup
- System
- PoE
- VLANs**
- Private VLANs
- Port Isolation
- VCL
- MAC-based VLAN
- Protocol-based VLAN
- IP Subnet-based VLAN
- Spanning Tree
- Green Ethernet
- Ports
- DHCP
- Security
- Aggregation
- Loop Protection
- IPMC Profile
- MVR
- IPMC
- LLDP
- MAC Table
- Voice VLAN
- QoS

Global VLAN Configuration

Allowed Access VLANs 1,2

Ethertype for Custom S-ports 88A8

Port VLAN Configuration for Switch 1

Port	Mode	Port VLAN	Port Type	Ingress Filtering	Ingress Acceptance	Egress Tagging	Allowed VLANs	Forbidden VLANs
*	<>	1	<>	☒	<>	<>	1	
1	Access	1	C-Port	☒	Tagged and Untagged	Untag All	1	
2	Access	1	C-Port	☒	Tagged and Untagged	Untag All	1	
3	Access	1	C-Port	☒	Tagged and Untagged	Untag All	1	
4	Access	1	C-Port	☒	Tagged and Untagged	Untag All	1	
5	Access	1	C-Port	☒	Tagged and Untagged	Untag All	1	
6	Access	1	C-Port	☒	Tagged and Untagged	Untag All	1	
7	Access	1	C-Port	☒	Tagged and Untagged	Untag All	1	

2. In the **Port VLAN Configuration** table, change all the port's **Port VLAN** to 2, apart from the first port and hit **Save** at the bottom.

Configuration
Quick Setup
System
PoE
VLANs
Private VLANs
Port Isolation
VCL
MAC-based VLAN
Protocol-based VLAN
IP Subnet-based VLAN
Spanning Tree
Green Ethernet
Ports
DHCP
Security
Aggregation
Loop Protection
IPMC Profile
MVR
IPMC
LLDP
MAC Table
Voice VLAN
QoS

Port VLAN Configuration for Switch 1

Port	Mode	Port VLAN	Port Type	Ingress Filtering	Ingress Acceptance	Egress Tagging	Allowed VLANs	Forbider VLANs
*	<>	1	<>	☒	<>	<>	1	
1	Access	1	C-Port	☒	Tagged and Untagger	Untag All	1	
2	Access	2	C-Port	☒	Tagged and Untagger	Untag All	2	
3	Access	2	C-Port	☒	Tagged and Untagger	Untag All	2	
4	Access	2	C-Port	☒	Tagged and Untagger	Untag All	2	
5	Access	2	C-Port	☒	Tagged and Untagger	Untag All	2	
6	Access	2	C-Port	☒	Tagged and Untagger	Untag All	2	
7	Access	2	C-Port	☒	Tagged and Untagger	Untag All	2	
8	Access	2	C-Port	☒	Tagged and Untagger	Untag All	2	
9	Access	2	C-Port	☒	Tagged and Untagger	Untag All	2	
10	Access	2	C-Port	☒	Tagged and Untagger	Untag All	2	
11	Access	2	C-Port	☒	Tagged and Untagger	Untag All	2	
12	Access	2	C-Port	☒	Tagged and Untagger	Untag All	2	

- you need to enable **IGMP Snooping** for the **VLAN2**, go to **Configuration->IPMC->IGMP Snooping->VLAN Configuration**. select **Add New IGMP VLAN**, set **VLAN ID** to 2 and tick the **Snooping Enabled** Box. Then **Save**.

IGMP Snooping VLAN Configuration

Start from VLAN 1 with 20 entries per page.

Delete	VLAN ID	Snooping Enabled	Querier Election	Querier Address	Compatibility	PRI	RV	QI (sec)	QRI (0.1 sec)	LLQI (0.1 sec)	URI (sec)
☐	1	☐	☒	0.0.0.0	IGMP-Auto	0	2	125	100	10	1
☐	2	☒	☒	0.0.0.0	IGMP-Auto	0	2	125	100	10	1

Add New IGMP VLAN

Save Reset

- While on the **IGMP Snooping VLAN Configuration**, you want to delete VLAN1 entry, if you have it, select the **Delete Tick box** and **Save**.

IGMP Snooping VLAN Configuration

Start from VLAN with entries per page.

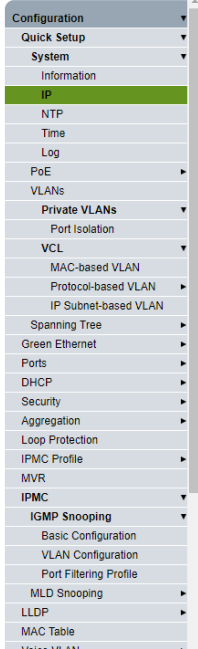
Delete	VLAN ID	Snooping Enabled	Querier Election	Querier Address	Compatibility	PRI	RV	QI (sec)	QRI (0.1 sec)	LLQI (0.1 sec)	URI (sec)
☐	2	☒	☒	0.0.0.0	IGMP-Auto	0	2	125	100	10	1

Add New IGMP VLAN

Save Reset

5. Add an IP Interface to VLAN2, go to **Configuration->Quick Setup->System->IP**. Make sure **Mode** in **IP Configuration** is set to router. Click **Add Interface** and in the new row you want to put **2** in **VLAN ID** and enter a static IP address from an unused network subnet in the IPv4 sections.

For example, if the main network is 192.168.0.1/24 you could use 192.168.1.1/24 or 192.168.10.1/24. Here, I am using 192.168.22.1 in the **Address** and 24 in the **Mask Length**. **Save**.



IP Configuration

Mode	Router
DNS Server 0	No DNS server
DNS Server 1	No DNS server
DNS Server 2	No DNS server
DNS Server 3	No DNS server
DNS Proxy	☐

IP Interfaces

Delete	VLAN	DHCPv4			IPv4		DHCPv6			IPv6	
		Enable	Fallback	Current Lease	Address	Mask Length	Enable	Rapid Commit	Current Lease	Address	Mask Length
☐	1	☐	0		172.16.112.108	16	☐	☐			
☐	2	☐	0		192.168.22.1	24	☐	☐			

Add Interface

IP Routes

Delete	Network	Mask Length	Gateway	Next Hop VLAN
--------	---------	-------------	---------	---------------

Add Route

Save Reset

- As shown in the last image, you want to set a static IP for **VLAN1** just like you did in the previous step. Make sure that the IP Address you use isn't already in use. Afterwards click the **Save**.

Note: this will cause you to lose connection until you reconnect with the new IP address.

- Add a static route to the main router by clicking **Add Route**. Put **0.0.0.0** in the **Network** section, **0** in the **Mask Length** section and the IP Address of the main router in your network in the **Gateway** section. After, click **Save**.



Model: AMS-4424P
 Firmware Version: v4.1.3

- Configuration
- Quick Setup
- Green Ethernet
- Ports
- DHCP
- Server
- Mode
- Excluded IP
- Pool
- Snooping
- Relay
- Security
- Aggregation
- Loop Protection
- IPMC Profile
- MVR
- IPMC
- LLDP
- MAC Table
- Voice VLAN
- QoS
- Mirroring
- UPnP
- GVRP
- Stack

DNS Server 2: No DNS server
 DNS Server 3: No DNS server
 DNS Proxy: ☐

IP Interfaces

Delete	VLAN	DHCPv4			IPv4		DHCPv6			IPv6	
		Enable	Fallback	Current Lease	Address	Mask Length	Enable	Rapid Commit	Current Lease	Address	Mask Length
☐	1	☐	0		172.16.112.108	16	☐	☐			
☐	2	☐	0		192.168.22.1	24	☐	☐			

Add Interface

IP Routes

Delete	Network	Mask Length	Gateway	Next Hop VLAN
☐	0.0.0.0	0	172.16.0.1	0

Add Route
Save Reset

8. Enable the **DHCP Server** by going to **Configuration->DHCP->Server->Mode**. Change **Global Mode** to **Enable** and click **Add VLAN Range**, put **2** in both boxes under **VLAN Range**. Click the **Save**.



Model: AMS-4424P
 Firmware Version: v4.1.3

- Configuration
- Quick Setup
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- LLDP
- MAC Table
- Voice VLAN
- QoS
- Mirroring
- UPnP

DHCP Server Mode Configuration

Global Mode

Mode: Enabled

VLAN Mode

Delete	VLAN Range	Mode
☐	2	Enabled

Add VLAN Range

Save Reset

- Exclude the switch's IP address, go to **Configuration->DHCP->Server->Exclude IP**. Click **Add IP Range** and put in IP address that you used in step 5 for the vlan2 interface in the first box. The second box you want to put a value that is higher by about 5-10. For example, I am doing 192.168.22.1-192.168.22.10. Afterwards, click the **Save**.



- Configuration
- Quick Setup
- Green Ethernet
- Ports
- DHCP
 - Server
 - Mode
 - Excluded IP**
 - Pool
 - Snooping
 - Relay
 - Security
 - Aggregation
 - Loop Protection
 - IPMC Profile
 - MVR
 - IPMC
 - LLDP

DHCP Server Excluded IP Configuration

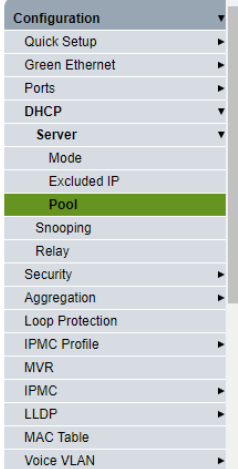
Excluded IP Address

Delete	IP Range
☐	192.168.22.1 - 192.168.22.10

Add IP Range

Save **Reset**

- Make a pool for the DHCP Server, go to **Configuration->DHCP->Server->Pool**. Click **Add New Pool**, Enter **EVO-IP-Pool** for the **Name** and then **Save**.



DHCP Server Pool Configuration

Pool Setting

Delete	Name	Type	IP	Subnet Mask	Lease Time
☐	EVO-IP-Pool	-	-	-	1 days 0 hours 0 minutes

Add New Pool

Save Reset

11. Click the **EVO-IP-Pool** name and in the new page you want to do the following,
 - a. **Type** set to Network
 - b. **IP** and **Subnet Mask** must be the same as the Network you chosen for VLAN2 in step 5.
 - c. The first **Default Router** is set to the IP address you used in step 5
 - d. Hit **Save** at the bottom

Configuration	Name EVO-IP-Pool
Quick Setup	
Green Ethernet	
Ports	
DHCP	
Server	
Mode	
Excluded IP	
Pool	
Snooping	
Relay	
Security	
Aggregation	
Loop Protection	
IPMC Profile	
MVR	
IPMC	
LLDP	
MAC Table	
Voice VLAN	
QoS	
Mirroring	
UPnP	
GVRP	
Stack	
sFlow	
UDLD	
Monitor	
Quick Setup	
Green Ethernet	
Ports	
State	
Traffic Overview	
QoS Statistics	
Detailed Statistics	
DHCP	
Security	
LACP	
Loop Protection	
MVR	

Setting	
Pool Name	EVO-IP-Pool
Type	Network
IP	192.168.22.0
Subnet Mask	255.255.255.0
Lease Time	1 days (0-365) 0 hours (0-23) 0 minutes (0-59)
Broadcast Address	
Default Router	192.168.22.1 0.0.0.0 0.0.0.0 0.0.0.0
DNS Server	0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0
Client Identifier	None
Hardware Address	
Client Name	
Advanced Options	
Save Reset	

12. Save your changes by going to **Administration->Configuration->Save Startup-Config**. Click the **Save Configuration**.



- State
- Traffic Overview
- QoS Statistics
- Detailed Statistics
- DHCP
- Security
- LACP
- Loop Protection
- MVR
- IPMC
- LLDP
- MAC Table
- Stack
- sFlow
- UDLD
- Tools
- Administration
 - Reboot
 - Factory Defaults
 - Firmware Update
 - Configuration
 - Save startup-config
 - Download
 - Upload
 - Activate
 - Delete

Save Running Configuration to startup-config

Please note: The generation of the configuration file may be time consuming, depending on the amount of non-default configuration.

[Save Configuration](#)

13. The switch is now configured. You need to add a static route to the main router to tell all traffic that's bound for the network you pick for vlan2 to head to the switch.